

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP2004/052674

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 B01J2/04 F25C1/00

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 B01J F25C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 03/008082 A (BRADFORD PARTICLE DESIGN LTD; KORDIKOWSKI, ANDREAS; PALAKODATY, SRINIV) 30 January 2003 (2003-01-30) page 4, line 18 - page 5, line 7 page 5, line 16 - line 18 page 8, line 6 - line 12 page 10, line 15 - line 27 page 11, line 21 - page 12, line 8 page 20, line 10 - page 21, line 13; figures 2-4	1-22
Y	EP 1 027 144 B (MESSER GRIESHEIM GMBH) 16 August 2000 (2000-08-16) cited in the application paragraphs '0008! - '0010! ----- -/--	1-22

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 00/56439 A (CARLFORS, JOHAN; GHADERI, RAOUF) 28 September 2000 (2000-09-28) page 9, line 11 - page 12, line 24; figure 1 -----	1-22
A	US 5 043 280 A (FISCHER ET AL) 27 August 1991 (1991-08-27) column 4, line 11 - line 17; claim 1 -----	1-22

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/052674

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 03008082	A	30-01-2003	CA 2454331 A1	30-01-2003
			EP 1409123 A1	21-04-2004
			WO 03008082 A1	30-01-2003
			GB 2381214 A ,B	30-04-2003
			JP 2004534648 T	18-11-2004
			MX PA04000201 A	18-03-2004
			TW 586963 B	11-05-2004
			US 2003109421 A1	12-06-2003
			AU 2003229913 A1	03-11-2003
			CA 2482499 A1	30-10-2003
			EP 1496857 A1	19-01-2005
			WO 03088945 A1	30-10-2003
			GB 2388541 A ,B	19-11-2003
			US 2003223939 A1	04-12-2003
EP 1027144	B	16-08-2000	DE 19748069 A1	06-05-1999
			AT 220344 T	15-07-2002
			BR 9813161 A	22-08-2000
			CA 2308286 A1	14-05-1999
			DE 59804743 D1	14-08-2002
			WO 9922855 A1	14-05-1999
			EP 1027144 A1	16-08-2000
			ES 2180210 T3	01-02-2003
			HU 0004013 A2	28-03-2001
			PL 340221 A1	15-01-2001
			US 6284302 B1	04-09-2001
WO 0056439	A	28-09-2000	AU 4157800 A	09-10-2000
			WO 0056439 A1	28-09-2000
			SE 9901059 A	23-09-2000
US 5043280	A	27-08-1991	DE 3744329 A1	06-07-1989
			AT 88887 T	15-05-1993
			DE 3880808 D1	09-06-1993
			EP 0322687 A2	05-07-1989
			ES 2056890 T3	16-10-1994
			JP 2004439 A	09-01-1990
			JP 2818174 B2	30-10-1998